NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FIREBREAK
(Feet)
CODE 394

DEFINITION

A strip of bare land or vegetation that retards fire.

PURPOSES

- To prevent the spread of wildfire.
- To control prescribed burns.

CONDITIONS WHERE PRACTICE APPLIES

All land uses where protection from wildfire is needed or prescribed burning is applied.

CRITERIA

Firebreaks may be temporary or permanent and shall consist of fire-resistant vegetation, non-flammable materials, bare ground, or a combination of these.

Firebreaks will be of sufficient width and length to contain the fire. The minimum width will be 10 feet for all purposes and types.

Firebreaks shall be located to minimize risk to the resources being protected.

Plant species selected for vegetated firebreaks will be noninvasive; possessing attributes making them capable of retarding fire, and easy to maintain.

Erosion control measures shall prevent sediment from leaving the site.

Comply with applicable laws and regulations, including the Texas Best Management Practices (BMPs) for Silviculture.

CONSIDERATIONS

Constructed firebreaks should tie into existing natural and cultural barriers. These include streams, lakes, ponds, public roads, drainage canals, railroads and utility rights-of-way.

The type of constructed firebreak will adapt to the local needs and conditions. The types include woods roads, plowed or disked firebreaks, burned firebreaks, green firebreaks and bladed firebreaks.

Roads, green firebreaks and plowed or disked firebreaks may be used in any area and on nearly all terrains, provided location specifications are followed.

Locate firebreaks on the contour where possible to minimize risk of soil erosion.

NRCS, TEXAS
May 2002

Firebreaks in forestland will be kept out of streamside management zones (SMZ's) or riparian forest buffers (code 391). In the absence of SMZ's or riparian buffers, the firebreak should be located at least 35 feet from Order 1 and 2 watercourses and 66 feet from streams of Order 3 or greater.

Locate firebreaks near ridge crests and valley bottoms as much as possible. If winds are predictable, firebreaks should be located perpendicular to the wind and on the upwind side of the area to be protected.

Firebreak construction should not interfere with natural runoff (such as in the flatwoods). On lands with slopes greater than 3%, care must be taken not to concentrate runoff waters with the firebreak.

Pasture firebreaks should be planned as part of the total grazing program.

Use plant species that are locally adapted for green firebreaks. After correct width and configuration is planned, use Wildlife Upland Habitat Management standard as a guide for plant selections.

Consider multiple uses in the design and layout.

Consider cultural resources when planning this practice. This practice may adversely affect cultural resources and should comply with GM 420, Part 401, during planning, prior to installation and during maintenance.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, and technical notes, narrative statements in the conservation plan and the burn plan, or other acceptable documentation. See Texas standard for Prescribed Burning, code 338.

Roads

Existing roads or trails can be effective firebreaks if properly maintained. Abandoned roads or trails should be renovated to correct any erosion problems. Remove fallen trees, leaves and other flammable materials to expose mineral soil prior to the critical fire season, which is typically November through March.

New roads should serve the fire protection needs of the woodland or other land, as well as providing drainage and access. Use aerial photographs and topographic maps to locate drainage and contours. Locate roads on ridgecrests or contours where possible. In forestland, plan new roads according to Texas Best Management Practices for Silviculture, the "Woods Roads" booklet and/or Forest Harvest Trails and Landings (655) Texas standard.

Construction:

a) The wheeling surface of roads should be at least ten feet wide, which will be sufficient to accommodate one-way truck traffic.

b) The maximum permissible sustained grade should be 10 percent and 8% on highly erodible sites and soils. Avoid steeper slopes. Break the road grade with slight reversals every 300 to 500 feet on long climbing grades.

c) Install proper drainage for the road. Surface drains are the most economical. Consult the publication "Woods Roads" for details regarding drainage.

Plowed or Disked Firebreaks

Plowed or disked firebreaks should be located:

a) parallel to public roads and railroads adjacent to boundaries

b) parallel to property boundaries

c) within field where needed

d) to minimize erosion, e.g., follow ridge lines and contours, where feasible

Additional measures, i.e., water control measures, should be installed where warranted to control erosion. Follow BMP's to further minimize erosion.

Construct plowed or disked firebreaks with fireline plows, heavy brush and bog disks, or farm plows and disks, depending upon the terrain and the character of the vegetation to be removed. Remove heavy vegetation of brush or shrubs by plowing or disking to expose mineral soil. The breaks should be a minimum of ten feet wide parallel to roads and boundaries and at least ten feet wide within fields. This width is usually sufficient to control most slowly moving, controlled ground fires. Remove overhanging vegetation and "fuel bridges". Fuel bridges are living and uprooted vegetation in continuum that creates the risk of the fire crossing the firebreak.

Burned Firebreaks

Locate burned firebreaks

a) parallel to public roads and railroads adjacent to boundaries

b) parallel to property boundaries

c) within fields, where necessary.

Construct:

a) Disk or plow two parallel strips each five feet wide and a minimum of 20 feet apart.

b) Remove all logs, limbs and other materials that are likely to burn for several hours from the area between the strips.

c) Do not remove healthy, valuable trees that are growing in the area between the strips, unless they are being removed for another purpose.

d) Burn between the strips according to prescribed burn plan; notify all necessary people and agencies (such as local fire departments, Texas Forest Service, etc.).

Green Firebreaks

Locate pasture firebreaks to protect the forage resources and for the convenience of the operator. Locate them:

a) parallel to public roads and railroads, adjacent to boundaries,

b) parallel to property boundaries

c) within fields where necessary

Areas beneath power lines and utility rights-of-way are excellent locations.

Construct:

a) Clear strips at least 30 feet wide adjoining forestlands and 50 feet wide within woodland by removing trees and scrubby growth. Breaks should be 50 feet wide within forestland to allow sufficient sunlight for grasses and forbs to grow successfully.

b) Prepare land for pasture planting and seeded with adapted grasses, forbs and/or legumes. Plants used in a green firebreak must be green during the time of year the fire is to be conducted. Cool season plants that stay green over winter and early spring are most effective. If perennial grasses are used, they must be grazed or mowed very short prior to using them as firebreak. Apply fertilizer needed to maintain vegetation.

c) See Texas standards for Pasture Planting or Wildlife Upland Habitat Management for additional guidance on establishment.

d) Plan Forage Management, if necessary.

Bladed Firebreak

Bladed firebreaks are usually located along public roads, railroads or property lines. They may also be located adjacent to boundaries between forestland and forage crops. They are usually just outside the fence parallel to the road or railroad. They should be located where most practical.

Construct:

a) Use a bulldozer, motor grader, pull grader or whatever equipment accomplishes the purpose.

b) Construct a strip 10 to 20 feet wide that is scraped down to mineral soil by one or two passes of the equipment. Roll soil material away from area to be burned. Construct just prior to main fire season.

c) The quality of construction should be such that the bladed firebreak can be used as a roadway for farm travel. Construct so as to reduce the possibility of erosion. See "Woods Roads" booklet for description of wing ditches and water bars.

OPERATION AND MAINTENANCE

Mow or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds. Grazed green firebreaks should be neither over-grazed nor under-grazed.

Inspect all firebreaks for woody materials such as overhanging vegetation, dead limbs and blown down trees and remove them from the firebreak.

Inspect firebreaks annually. Rework bare ground firebreaks and re-burn burned firebreaks as necessary to keep them clear of flammable vegetation.

Maintain growth on green firebreaks. Apply proper nutrient management and pest management. Periodically renovate green firebreaks as needed to restore their vigor and usefulness.

Repair erosion control measures as necessary to ensure proper function.

Clean and repair all surface drains in firebreaks.

Access by vehicles or people will be controlled to prevent damage to the firebreak.

Bare ground firebreaks, which are no longer needed will be stabilized.

APPROVAL

/s/ GARY VALENTINE

Acting State Forester

May 17, 2002

Reviewed and determined adequate without need of revision:

_____

Zone Forester

_____

Date

STATEMENT OF NEED

This practice is needed in the

_____FOTG.

_____

Natural Resource Manager

_____

Date

_____

Zone Forester

_____

Date

_____

Zone Forester

_____

Date

CERTIFICATION